

Entered
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In the Claims

1 Claims 1-14 (Cancelled)

1 15. (Original) A method for determining the location of a contaminant in a fluid flow system,
2 comprising the steps of:

- 3 (a) injecting a conservative tracer and a partitioning tracer into the flow system at a
4 first location;
- 5 (b) advecting the tracers along the flow system at a first velocity to create an advection
6 flow field;
- 1 (c) extracting the tracers at a second location in the flow system;
- 2 (d) introducing a perturbation to the advection flow field at a perturbation time by
3 changing and then re-establishing the advection flow at a second velocity, which
4 may be different than the first velocity, creating a unique change in the
5 concentration of the partition tracer;
- 6 (e) extracting the partitioning tracer as a function of time relative to the perturbation
7 time;
- 8 (f) measuring the concentration of the partitioning tracer as a function of the time; and
- 9 (g) determining the location of contamination from the time of arrival of the
10 partitioning tracer relative to the perturbation time and the advection flow velocity.

1 Claims 16-32 (Cancelled)

1 33. (Previously presented) The method of claim 15 wherein the injecting and the advecting in